Source: 57 FR 9065, March 16, 1992, unless otherwise noted.

s 80.1065 Applicability.

(a)

(a) The regulations contained in s 80.1119 apply to public coast stations and coast earth stations as of February 1, 1992.

(b)

(b) The regulations contained within this subpart apply to all passenger ships regardless of size and cargo ships of 300 tons gross tonnage and upwards as follows:

(b) (1)

(1) Ships must comply with ss 80.1085(a)(4) and 80.1085(a)(6) not later than August 1, 1993.

(b) (2)

(2) Ships constructed on or after February 1, 1992, must comply with s 80.1095 as of that date. All other ships must comply with s 80.1095 as of February 1, 1995.

(b) (3)

(3) Ships constructed on or after February 1, 1995, must comply with all requirements of this subpart.

(b) (4)

(4) Ships constructed before February 1, 1995, must comply with all requirements of this subpart as of February 1, 1999.

(b) (5)

(5) During the period between February 1, 1992, and February 1, 1999, all ships must comply with:

(b) (5) (i)

(i) The requirements of this subpart;

(b) (5) (ii)

(ii) The requirements of chapter IV of the International Convention for the Safety of Life at Sea, 1974, in force prior to February 1, 1992 (see subparts Q and R of this part); or

(b) (5) (iii)

(iii) The requirements of either s 80.836 or s 80.933.

(b) (6)

(6) The expression "ships constructed" means "ships the keels of which are laid, or construction identificable with a specific ship begins and assembly of that ship has commenced comprising at least 50 tons gross tonnage or 1% of the estimated mass of all structural material, whichever is less.

(c)

(c) The requirements of this subpart do not modify the requirements for ships navigated on the Great Lakes or small passenger boats. The requirements contained in the Agreement Between the United States of America and Canada for Promotion of Safety on the Great Lakes by Means of Radio, 1973, continue to apply (see subpart T of this part). The requirements contained in part III of title III of the Communications Act continue to apply (see subpart S of this part).

(d)

(d) No provision in this subpart is intended to prevent the use by any ship, survival craft, or person in distress, of any means at their disposal to attract attention, make known their position and obtain help.

s 80.1067 Inspection of station.

(a)

(a) Ships must have the required equipment inspected at least once every 12 months by an FCC-licensed technician holding a GMDSS Radio Maintainer's License. If the ship passes the inspection the technician will issue a Safety Certificate. Safety Certificates may be obtained from the Commission's National Call Center at 1-888-CALL FCC (1-888-225-5322) or from its field offices. The effective date of the ship Safety Certificate is the date the station is found to be in compliance or not later than one business day later. The FCC-licensed technician must use the latest FCC Information Bulletin, How to Conduct a GMDSS Inspection. Contact the FCC's National Call Center at 1- 888-CALL FCC (1-888-225-5322) to request a copy.

(b)

(b) Certificates issued in accordance with the Safety Convention must be posted in a prominent and accessible place on the ship.

s 80.1069 Maritime sea areas.

(a)

(a) For the purpose of this subpart, a ship's area of operation is defined as follows:

(a) (1)

(1) Sea area A1. An area within the radiotelephone coverage of at least one VHF coast station in which continuous DSC alerting is available as defined by the International Maritime Organization.

(a) (2)

(2) Sea area A2. An area, excluding sea area A1, within the radiotelephone coverage of at least one MF coast station in which continuous DSC alerting is available as defined by the International Maritime Organization.

(a) (3)

(3) Sea area A3. An area, excluding sea areas A1 and A2, within the coverage of an INMARSAT geostationary satellite in which continuous alerting is available.

(a) (4)

(4) Sea area A4. An area outside sea areas A1, A2 and A3.

(b)

(b) Maritime sea areas are delineated in the International Maritime Organization Publication GMDSS Master Plan of Shore-Based Facilities. The Master Plan can be purchased from the International Maritime Organization, 4 Albert Embankment, London SE1 7SR, United Kingdom.

s 80.1071 Exemptions.

(a)

(a) In certain circumstances, partial or conditional exemptions may be granted to individual ships from the requirements of ss 80.1085, 80.1087, 80.1089, 80.1091, and 80.1093 provided: such ships comply with the functional requirements of s 80.1081 and a showing is made that such an exemption will not have a material effect upon the general efficiency of the service for the safety of all ships.

(b)

(b) An exemption may be granted under paragraph (a) of this section only:

(b) (1)

(1) If the conditions affecting safety are such as to render the full application of ss 80.1085, 80.1087, 80.1089, 80.1091, and 80.1093 unreasonable or unnecessary or otherwise not in the public interest;

(b) (2)
(2) In exceptional circumstances, for a single voyage outside the sea area or sea areas for which the ship is equipped; or.
(b) (3)
(3) Prior to February 1, 1999, when the ship will be taken permanently out of service within two years of a requirement date specified in s 80.1065.

s 80.1073 Radio operator requirements for ship stations.

(a)
(a) Ships must carry at least two persons holding GMDSS Radio Operator's Licenses as specified in s 13.2 of this chapter for distress and safety radiocommunications purposes. The GMDSS Radio Operator's License qualifies personnel as GMDSS radio operator for the purposes of operating GMDSS radio installation, including basic equipment adjustments as denoted in knowledge requirements specified in s 13.21 of this chapter.
(a) (1)
(1) One of the qualified GMDSS radio operators must be designated to have primary responsibility for radiocommunications during distress incidents.
(a) (2)
(2) A second qualified GMDSS radio operator must be designated as backup for distress and safety radiocommunications.
(b)
(b) A qualified GMDSS radio operator, and a qualified backup, as specified in paragraph (a) of this section must be:
(b) (1)
(1) Available to act as the dedicated radio operator in cases of distress as described in s 80.1109(a);
(b) (2)
(2) Designated to perform as part of normal routine each of the applicable communications described in s 80.1109(b);
(b) (3)
(3) Responsible for selecting HF DSC guard channels and receiving scheduled maritime safety information broadcasts;
(b) (4)
(4) Designated to perform communications described in s 80.1109(c);
(b) (5)
(5) Responsible for ensuring that the watches required by s 80.1123 are properly maintained; and
(b) (6)
(6) Responsible for ensuring that the ship's navigation position is entered, either manually or automatically through a navigation receiver, into all installed DSC equipment at least every four hours while the ship is underway.

s 80.1074 Radio maintenance personnel for at-sea maintenance.

(a)
(a) Ships that elect the at-sea option for maintenance of GMDSS equipment (see s 80.1105) must carry at least one person who qualifies as a GMDSS radio maintainer, as specified in paragraph (b) of this section, for the maintenance and repair of equipment specified in this subpart. This person may be, but need not be, the person designated as GMDSS radio operator as specified in s 80.1073.
(b)

(b) The following licenses qualify personnel as GMDSS radio maintainers to perform at-sea maintenance of equipment specified in this subpart. For the purposes of this subpart, no order is intended by this listing or the alphanumeric designator.

(b) (1)

(1) GM: GMDSS Maintainer's License;

(b) (2)

(2) GB: GMDSS Operator's/Maintainer's License; or,

(b) (3)

~~(3) Until February 1, 1999:~~

(b) (3) (i)

~~(i) T-1: First Class Radiotelegraph Operator's Certificate;~~

(b) (3) (ii)

~~(ii) T-2: Second Class Radiotelegraph Operator's Certificate;~~ or,

(b) (3) (iii)

(iii) G: General Radiotelephone Operator License.

(c)

(c) While at sea, all adjustments of radio installations, servicing, or maintenance of such installations that may affect the proper operation of the GMDSS station must be performed by, or under the immediate supervision and responsibility of, a qualified GMDSS radio maintainer as specified in paragraph (b) of this section.

(d)

(d) The GMDSS radio maintainer must possess the knowledge covering the requirements set forth in IMO Assembly on Training for Radio Personnel (GMDSS), Annex 5 and IMO Assembly on Radio Maintenance Guidelines for the Global Maritime Distress and Safety System related to Sea Areas A3 and A4.

s 80.1075 Radio records.

A record must be kept, as required by the Radio Regulations and s 80.409 (a), (b) and (e), of all incidents connected with the radiocommunication service which appear to be of importance to safety of life at sea.

s 80.1077 Frequencies.

The following table describes the frequencies used in the Global Maritime Distress and Safety System:

Alerting:	
406 EPIRBs	406-406.1 MHz (Earth-to-space).
	1544-1545 MHz (space-to-Earth).
INMARSAT A or C SES	1626.5-1645.5 MHz (Earth-to-space).
VHF DSC Ch. 70	156.525 MHz [FN1].
MF/HF DSC [FN2]	2187.5 kHz [FN3], 4207.5 kHz, 6312 kHz, 8414.5 kHz, 12577 kHz, and 16804.5 kHz.
On-scene communications:	
VHF Ch. 16	156.8 MHz.
MF radiotelephony	2182 kHz.
NBDP	2174.5 kHz.
Communications involving aircraft:	

On-scene, including search and rescue	156.8 MHz [FN4], 121.5 MHz [FN5], 123.1 MHz, 156.3 MHz, 2182 kHz, 3023 kHz, 4125 kHz, and 5680 kHz [FN6].
Locating signals:	
406 MHz EPIRB beacons	121.5 MHz.
9 GHz radar transponders	9200-9500 MHz.
Maritime safety information (MSI):	
International NAVTEX	518 kHz [FN7].
Warnings	490 kHz [FN8], 4209.5 kHz [FN9].
NBDP	4210 kHz, 6314 kHz, 8416.5 kHz, 12579 kHz, 16806.5 kHz, 19680.5 kHz, 22376 kHz, 26100.5 kHz.
Satellite	1530-1545 MHz (space-to-Earth) [FN10].
General distress and safety communications and calling:	
Satellite	1530-1544 MHz (space-to-Earth) and 1626.5-1645.5 (Earth-to-space) [FN10].
Radiotelephony	2182 kHz, 4125 kHz, 6215 kHz, 8291 kHz, 12290 kHz, 16420 kHz, and 156.8 MHz.
NBDP	2174.5 kHz, 4177.5 kHz, 6268 kHz, 8376.5 kHz, 12520 kHz, and 16695 kHz.
DSC	2187.5 kHz, 4207.5 kHz, 6312 kHz, 8414.5 kHz, 12577 kHz, 16804.5 kHz, and 156.525 MHz.
Survival craft:	
VHF radiotelephony	156.8 MHz and one other 156-174 MHz frequency.
9 GHz radar transponders	9200-9500 MHz.

FN1 Frequency 156.525 MHz can be used for ship-to-ship alerting and, if within sea area A1, for ship-to-shore alerting.

FN2 For ships equipped with MF/HF equipment, there is a watch requirement on 2187.5 kHz, 8414.5 kHz, and one other frequency.

FN3 Frequency 2187.5 kHz can be used for ship-to-ship alerting and, if within sea areas A2, for ship-to-shore alerting.

FN4 Frequency 156.8 MHz may also be used by aircraft for safety purposes only.

FN5 Frequency 121.5 MHz may be used by ships for aeronautical distress and urgency purposes.

FN6 The priority of use for ship-aircraft communications in 4125 kHz, then 3023 kHz. Additionally, frequencies 123.1 MHz, 3023 kHz, and 5680 kHz can be used by land stations engaged in coordinated search and rescue operations.

FN7 The international NAVTEX frequency 518 kHz is the primary frequency for receiving maritime safety information. The other frequencies are used only to augment the coverage or information provided on 518 kHz.

FN8 Frequency 490 kHz cannot be used for MSI employing NBDP transmissions until February 2, 1999.

FN9 Frequency 4209.5 kHz is not used in the United States (see 47 CFR 2.106 footnote 520A).

FN10 In addition to EPIRBs, 1544-1545 MHz can be used for narrowband distress and safety operations and 1645.5-1646.5 MHz can be used for relay of distress alerts between satellites. Feeder links for satellite communications are assigned from the fixed satellite service, see 47 CFR 2.106.

s 80.1081 Functional requirements.

Ships, while at sea, must be capable:
(a)
(a) Except as provided in ss 80.1087(a)(1) and 80.1091(a)(4)(iii), of transmitting ship-to-shore distress alerts by at least two separate and independent means, each using a different radiocommunication service;
(b)
(b) Of receiving shore-to-ship distress alerts;
(c)
(c) Of transmitting and receiving ship-to-ship distress alerts;
(d)
(d) Of transmitting and receiving search and rescue co-ordinating communications;
(e)
(e) Of transmitting and receiving on-scene communications;
(f)
(f) Of transmitting and receiving signals for locating;
(g)
(g) Of transmitting and receiving maritime safety information;
(h)
(h) Of transmitting and receiving general radiocommunications to and from shore-based radio systems or networks; and
(i)
(i) Of transmitting and receiving bridge-to-bridge communications.

s 80.1083 Ship radio installations.

(a)
(a) Ships must be provided with radio installations capable of complying with the functional requirements prescribed by s 80.1081 throughout its intended voyage and, unless exempted under s 80.1071, complying with the requirements of s 80.1085 and, as appropriate for the sea area of areas through which it will pass during its intended voyage, the requirements of either ss 80.1087, 80.1089, 80.1091, or 80.1093.
(b)
(b) The radio installation must:
(b) (1)
(1) Be so located that no harmful interference of mechanical, electrical or other origin affects its proper use, and so as to ensure electromagnetic compatibility and avoidance of harmful interaction with other equipment and systems;
(b) (2)
(2) Be so located as to ensure the greatest possible degree of safety and operational availability;
(b) (3)
(3) Be protected against harmful effects of water, extremes of temperature and other adverse environmental conditions;
(b) (4)
(4) Be provided with reliable, permanently arranged electrical lighting, independent of the main and emergency sources of electrical power, for the adequate illumination of the radio controls for operating the radio installation; and
(b) (5)

(5) Be clearly marked with the call sign, the ship station identity and other codes as applicable for the use of the radio installation.

(c)

(c) Control of the VHF radiotelephone channels required for navigational safety must be immediately available on the navigating bridge convenient to the conning position and, where necessary, facilities should be available to permit radiocommunications from the wings of the navigating bridge. Portable VHF equipment may be used to meet the latter provision.

s 80.1085 Ship radio equipment--General.

This section contains the general equipment requirements for all ships subject to this subpart.

(a)

(a) Ships must be provided with:

(a) (1)

(1) A VHF radio installation capable of transmitting and receiving:

(a) (1) (i)

(i) DSC on the frequency 156.525 MHz (channel 70), and it must be able to initiate the transmission of distress alerts on channel 70 from the position from which the ship is normally navigated; and

(a) (1) (ii)

(ii) Radiotelephony on the frequencies 156.300 MHz (channel 6), 156.650 MHz (channel 13), and 156.800 MHz (channel 16);

(a) (2)

(2) A dedicated, non-scanning radio installation capable of maintaining a continuous DSC watch on VHF channel 70 which may be separate from, or combined with, that required by paragraph (a)(1)(i) of this section;

(a) (3)

(3) A radar transponder capable of operating in the 9 GHz band, which must be stowed so that it is easily utilized (this transponder may be one of those required by s 80.1095(b) for a survival craft);

(a) (4)

(4) A receiver capable of receiving international NAVTEX service broadcasts;

(a) (5)

(5) If the ship is engaged on voyages in any area of INMARSAT coverage in which an international NAVTEX service is not provided, a radio facility for reception of maritime safety information by the INMARSAT enhanced group calling system, i.e., SafetyNet, (this requirement does not apply to ships engaged exclusively on voyages in areas where an HF direct-printing telegraphy maritime safety information service, as identified by the IMO GMDSS Master Plan Publication, is provided and the ship is fitted with equipment capable of receiving such service); and

(a) (6)

(6) A satellite emergency position-indicating radio beacon (satellite EPIRB) which must be:

(a) (6) (i)

(i) Capable of transmitting a distress alert through the polar orbiting satellite service operating in the 406 MHz band (406 MHz EPIRB); and

(a) (6) (ii)

(ii) Installed in an easily accessible position, ready to be manually released and capable of being carried by one person into a survival craft, capable of floating free if the ship sinks and of being automatically activated when afloat, and capable of being activated manually.

(b)

~~(b) Until February 1, 1999, all ships must be equipped with a radio installation consisting of a radiotelephone distress frequency 2182 kHz watch receiver prescribed by s 80.807. This requirement does not apply to ships constructed on or after February 1, 1997.~~

(c)

~~(c) Until February 1, 1999, all ships, except ships engaged on voyages in sea area A1 only, must be equipped with a device for generating the 2182 kHz radiotelephone alarm signal as prescribed by s 80.807. This requirement does not apply to ships constructed on or after February 1, 1997.~~

(d)

(d) Ships must carry the most recent edition of the IMO publication entitled GMDSS Master Plan of Shore-Based Facilities. Notice of new editions will be published in the Federal Register and copies may be obtained from: International Maritime Organization, 4 Albert Embankment, London SE1 7SR, United Kingdom.

s 80.1087 Ship radio equipment--Sea area A1.

This section contains the additional equipment requirements for ships that remain within sea area A1 at all times.

(a)

(a) In addition to meeting the requirements of s 80.1085, ships engaged on voyages exclusively in sea area A1 must be provided with a radio installation capable of initiating the transmission of ship-to-shore distress alerts from the position from which the ship is normally navigated, operating either:

(a) (1)

(1) On VHF using DSC; or

(a) (2)

(2) Through the polar orbiting satellite service on 406 MHz (this requirement may be fulfilled by the 406 MHz EPIRB, required by s 80.1085(a)(6), either by installing the 406 MHz EPIRB close to, or by allowing remote activation from, the position from which the ship is normally navigated); or

(a) (3)

(3) On MF using DSC if the ship is engaged on voyages within coverage of MF coast stations equipped with DSC; or

(a) (4)

(4) On HF using DSC; or

(a) (5)

(5) Through the INMARSAT geostationary satellite service if within INMARSAT coverage. This requirement may be fulfilled by an INMARSAT ship earth station capable of two way communication.

(b)

(b) The VHF radio installation, required by s 80.1085(a)(1), must also be capable of transmitting and receiving general radiocommunications using radiotelephony.

s 80.1089 Ship radio equipment--Sea areas A1 and A2.

This section contains the additional equipment requirements for ships that remain within sea areas A1 or A2 at all times. Ships fitting in accordance with this section satisfy the sea area A1 requirements denoted in s 80.1087.

(a)

(a) In addition to meeting the requirements of s 80.1085, ships engaged on voyages beyond sea area A1, but remaining within sea area A2, must be provided with:
(a) (1)
(1) An MF radio installation capable of transmitting and receiving, for distress and safety purposes, on the frequencies:
(a) (1) (i)
(i) 2187.5 kHz using DSC; and
(a) (1) (ii)
(ii) 2182 kHz using radiotelephony;
(a) (2)
(2) A radio installation capable of maintaining a continuous DSC watch on the frequency 2187.5 kHz which may be separate from or combined with, that required by paragraph (a)(1)(i) of this section; and
(a) (3)
(3) Means of initiating the transmission of ship-to-shore distress alerts by a radio service other than MF operating either:
(a) (3) (i)
(i) Through the polar orbiting satellite service on 406 MHz (this requirement may be fulfilled by the 406 MHz EPIRB required by s 80.1085(a)(6), either by installing the 406 MHz EPIRB close to, or by allowing remote activation from, the position from which the ship is normally navigated); or
(a) (3) (ii)
(ii) On HF using DSC; or
(a) (3) (iii)
(iii) Through the INMARSAT geostationary satellite service if within INMARSAT coverage; this requirement may be fulfilled by an INMARSAT ship earth station.
(b)
(b) It must be possible to initiate transmission of distress alerts by the radio installations specified in paragraphs (a)(1) and (a)(3) of this section from the position from which the ship is normally navigated.
(c)
(c) Ships subject to this section must be capable of transmitting and receiving general radiocommunications using radiotelephony or direct-printing telegraphy by either:
(c) (1)
(1) A radio installation operating on working frequencies in the bands between 1605-4000 kHz or between 4000-27500 kHz (this requirement may be fulfilled by the addition of this capability to the equipment required by paragraph (a)(1) of this section); or
(c) (2)
(2) An INMARSAT ship earth station.

s 80.1091 Ship radio equipment--Sea areas A1, A2, and A3.

This section contains the additional equipment requirements for ships that remain within sea areas A1, A2, or A3 at all times. Ships fitting in accordance with this section satisfy the requirements denoted in ss 80.1087 or 80.1089 for sea-areas A1 and A2. Ships fitting in accordance to this section have the option to comply with either the requirements of paragraph (a) or (b) of this section.
(a)
(a) In addition to meeting the requirements of s 80.1085, ships subject to this section must be provided with:
(a) (1)

(1) An INMARSAT ship earth station capable of:
(a) (1) (i)
(i) Transmitting and receiving distress and safety communications using direct-printing telegraphy;
(a) (1) (ii)
(ii) Initiating and receiving distress priority calls;
(a) (1) (iii)
(iii) Maintaining watch for shore-to-ship distress alert, including those directed to specifically defined geographical areas;
(a) (1) (iv)
(iv) Transmitting and receiving general radiocommunications, using either radiotelephony or direct-printing telegraphy; and
(a) (2)
(2) An MF radio installation capable of transmitting and receiving, for distress and safety purposes, on the frequencies:
(a) (2) (i)
(i) 2187.5 kHz using DSC; and
(a) (2) (ii)
(ii) 2182 kHz using radiotelephony; and
(a) (3)
(3) A radio installation capable of maintaining a continuous DSC watch on the frequency 2187.5 kHz which may be separate from or combined with that required by paragraph (a)(2)(i) of this section; and
(a) (4)
(4) Means of initiating the transmission of ship-to-shore distress alerts by a radio service operating either:
(a) (4) (i)
(i) Through the polar orbiting satellite service on 406 MHz (this requirement may be fulfilled by the 406 MHz EPIRB required by s 80.1085(a)(6), either by installing the 406 MHz EPIRB close to, or by allowing remote activation from, the position from which the ship is normally navigated); or
(a) (4) (ii)
(ii) On HF using DSC: or
(a) (4) (iii)
(iii) Through the INMARSAT geostationary satellite service, by an additional ship earth station.
(b)
(b) In addition to meeting the requirements of s 80.1085, ships subject to this section must be provided with:
(b) (1)
(1) An MF/HF radio installation capable of transmitting and receiving on all distress and safety frequencies in the bands between 1605-27500 kHz using DSC, radiotelephony, and narrow-band direct-printing telegraphy; and
(b) (2)
(2) Equipment capable of maintaining DSC watch on 2187.5 kHz, 8414.5 kHz and on at least one of the distress and safety DSC frequencies 4207.5 kHz, 6312 kHz, 12577 kHz, or 16804.5 kHz although it must be possible to select any of these DSC distress and safety frequencies at any time (this equipment may be separate from, or combined with, the equipment required by paragraph (b)(1) of this section); and
(b) (3)
(3) Means of initiating the transmission of ship-to-shore distress alerts by a radiocommunication service other than HF operating either:

(b) (3) (i)
(i) Through the polar orbiting satellite service on 406 MHz (this requirement may be fulfilled by the 406 MHz EPIRB required by s 80.1085(a)(6), either by

installing the 406 MHz EPIRB close to, or by allowing remote activation from, the position from which the ship is normally navigated; or

(b) (3) (ii)

(ii) Through the INMARSAT geostationary satellite service (this requirement may be fulfilled by an INMARSAT ship earth station).

(b) (4)

(4) In addition, ships must be capable of transmitting and receiving general radiocommunications using radiotelephony or direct-printing telegraphy by an MF/HF radio installation operating on working frequencies in the bands between 1605-4000 kHz and between 4000-27500 kHz (this requirement may be fulfilled by the addition of this capability to the equipment required by paragraph (b)(1) of this section).

(c)

(c) It must be possible to initiate transmission of distress alerts by the radio installations specified in paragraphs (a)(1), (a)(2), (a)(4), (b)(1), and (b)(3) of this section from the position from which the ship is normally navigated.

s 80.1093 Ship radio equipment--Sea areas A1, A2, A3 and A4.

This section contains the additional equipment requirements for ships that sail in all sea areas, i.e., sea areas A1, A2, A3, and A4. Ships fitting in accordance with this section satisfy the requirements denoted in ss 80.1087, 80.1089, and 80.1091 for sea areas A1, A2, and A3.

(a)

(a) In addition to meeting the requirements of s 80.1085, ships engaged on voyages in all sea areas must be provided with the radio installations and equipment required by s 80.1091(b), except that the equipment required by s 80.1091(b)(3)(ii) cannot be accepted as an alternative to that required by regulation s 80.1091(b)(3)(i), which must always be provided.

(b)

(b) Ships engaged on voyages in all sea areas also must comply with the requirements of s 80.1091(c).

s 80.1095 Survival craft equipment.

(a)

(a) At least three two-way VHF radiotelephone apparatus must be provided on every passenger ship and on every cargo ship of 500 tons gross tonnage and upwards. At least two two-way VHF radiotelephone apparatus must be provided on every cargo ship of between 300-500 tons gross tonnage. Portable two-way VHF radiotelephones must be stowed in such locations that they can be rapidly placed in any survival craft other than liferafts required by Regulation III/26.1.4 of the SOLAS Convention. Alternatively, survival craft may be fitted with a fixed two-way VHF radiotelephone installation. Two-way VHF radiotelephone apparatus, portable or fixed, must conform to performance standards as specified in s 80.1101. Two-way VHF radiotelephone apparatus provided on board ships prior to February 1, 1992, and not complying fully with the performance standards specified in s 80.1101, may be used until February 1, 1999, provided it is compatible with approved two-way VHF radiotelephone apparatus.

(b)

(b) At least one radar transponder must be carried on each side of every passenger ship and every cargo ship of 500 tons gross tonnage and upwards. At least one radar transponder must be carried on every cargo ship of 300 tons gross tonnage and upwards but less than 500 tons gross tonnage. Such radar transponders must conform to performance standards as specified in s 80.1101. The radar transponders must be stowed in such locations that they can be rapidly placed in any survival craft other than liferafts required on cargo ships in forward and aft areas (see Regulation III/26.1.4 of the SOLAS Convention). Alternatively, one radar transponder must be stowed in each survival craft other than those required by Regulation III/26.1.4 of the SOLAS Convention. One of these radar transponders may be radar transponder required by s 0.1085(a)(3).

(c)

(c) Survival craft equipment must be tested at intervals not to exceed twelve months. For batteries used for survival craft equipment, the month and year of its manufacture must be permanently marked on the battery. Also, the month and year upon which 50 percent of its useful life will expire must be permanently marked on both the battery and the outside of the transmitter. Batteries must be replaced if 50 percent of their useful life has expired or if the transmitter has been used in an emergency situation.

s 80.1099 Ship sources of energy.

(a)

(a) There must be available at all times, while the ship is at sea, a supply of electrical energy sufficient to operate the radio installations and to charge any batteries used as part of a reserve source of energy for the radio installations.

(b)

(b) A reserve source of energy to supply radio installations must be provided on every ship for the purpose of conducting distress and safety radiocommunications, in the event of failure of the ship's main and emergency sources of electrical power. The reserve sources of energy must be capable of simultaneously operating the VHF radio installation required by s 80.1085(a)(1) and, as appropriate for the sea area or sea areas for which the ship is equipped, either the MF radio installation required by s 80.1089(a)(1), the MF/HF radio installation required by ss 80.1091(a)(2)(i) or 80.1093(a), or the INMARSAT ship earth station required by s 80.1091(a)(1) and any of the additional loads mentioned in paragraphs (d), (e) and (h) of this section for a period of at least:

(b) (1)

(1) One hour, on ships constructed on or after February 1, 1995;

(b) (2)

(2) One hour, on ships constructed before February 1, 1995, if the emergency source of electrical power complies fully with all relevant requirements of SOLAS, Chapter II-1, Regulation 42 or 43 (as amended); or

(b) (3)

(3) Six hours, on ships constructed before February 1, 1995, and on cargo ships of less than 500 tons gross tonnage, if the emergency source of electrical power is not provided or does not comply fully with all relevant requirements of SOLAS, Chapter II-1, Regulation 42 or 43 (as amended).

(c)

(c) The reserve sources of energy need not supply independent HF and MF radio installations at the same time. The reserve sources of energy must be independent of the propelling power of the ship and the ship's electrical system.

(d)

(d) Where, in addition to the VHF radio installation, two or more of the other radio installations, referred to in paragraph (b) of this section, can be connected to the reserve sources of energy, they must be capable of simultaneously supplying, for one hour, as specified in paragraph (b) of this section, the VHF radio installation and;

(d) (1)

(1) All other radio installations which can be connected to the reserve sources of energy at the same time; or

(d) (2)

(2) Whichever of the other radio installations will consume the most power, if only one of the other radio installations can be connected to the reserve sources of energy at the same time as the VHF radio installation.

(e)

(e) The reserve sources of energy may be used to supply the electrical lighting required by s 80.1083(b)(4).

(f)

(f) Where a reserve source of energy consists of a rechargeable accumulator battery or batteries:

(f) (1)

(1) A means of automatically charging such batteries must be provided which must be capable of recharging them to minimum capacity requirements within 10 hours; and

(f) (2)

(2) The capacity of the battery or batteries must be checked, using an appropriate method, at intervals not exceeding 12 months. These checks must be performed when the vessel is not at sea.

(g)

(g) The accumulator batteries which provide a reserve source of energy must be installed to ensure: The highest degree of service, a reasonable lifetime, reasonable safety; that the battery temperatures remain within the manufacturer's specifications whether under charge or idle; and that when fully charged, the batteries will provide at least the minimum required hours of operation under all weather conditions.

(h)

(h) If an uninterrupted input of information from the ship's navigational or other equipment to a radio installation required by this subpart is needed to ensure its proper performance, means must be provided to ensure the continuous supply of such information in the event of failure of the ship's main or emergency source of electrical power.

(i)

(i) An uninterruptible power supply or other means of ensuring a continuous supply of electrical power, within equipment tolerances, shall be provided to all GMDSS equipment that could be affected by normal variations and interruptions of ship's power.

s 80.1101 Performance standards.

(a)

(a) The abbreviations used in this section are as follows:

(a) (1)

(1) International Maritime Organization (IMO).

(a) (2)

(2) International Telegraph and Telephone Consultative Committee (CCITT).
(a) (3)
(3) International Electrotechnical Commission (IEC).
(a) (4)
(4) International Organization for Standardization (ISO).
(a) (5)
(5) International Radio Consultative Committee (CCIR).
(b)
(b) All equipment specified in this subpart must meet the general requirements for shipboard equipment listed in this paragraph, which are incorporated by reference.
(b) (1)
(1) IMO Resolution A.694(17), "General Requirements for Shipborne Radio Equipment Forming Part of the Global Maritime Distress and Safety System (GMDSS) and for Electronic Navigational Aids," adopted 6 November 1991.
(b) (2)
(2) CCITT Recommendation E.161, "Arrangement of Figures, Letters and Symbols on Telephones and Other Devices that Can Be Used for Gaining Access to a Telephone Network," 1989.
(b) (3)
(3) CCITT Recommendation Q.11, "Numbering Plan for the International Telephone Service," 1989.
(b) (4)
(4) IEC Publication 92-101, "Electrical Installations in Ships," Third Edition 1980 with amendments through 1984.
(b) (5)
(5) IEC Publication 533, "Electromagnetic Compatibility of Electrical and Electronic Installations in Ships," First Edition 1977.
(b) (6)
(6) IEC Publication 945, "Marine Navigational Equipment," First Edition 1988.
(b) (7)
(7) ISO Standard 3791, "Office Machines and Data Processing Equipment--Keyboard Layouts for Numeric Applications," First Edition 1976(E).
(c)
(c) The equipment specified in this subpart must also conform to the appropriate performance standards listed below which are incorporated by reference.
(c) (1)
(1) NAVTEX receivers:
(c) (1) (i)
(i) IMO Resolution A.525(13), "Performance Standards for Narrow-band Direct Printing Telegraph Equipment for the Reception of Navigational and Meteorological Warnings and Urgent Information to Ships," adopted 17 November 1983.
(c) (1) (ii)
(ii) CCIR Recommendation 540-2, "Operational and Technical Characteristics for an Automated Direct-printing Telegraph System for Promulgation of Navigational and Meteorological Warnings and Urgent Information to Ships," 1990.
(c) (2)
(2) VHF radio equipment:
(c) (2) (i)
(i) IMO Resolution A.609(15), "Performance Standards for Shipborne VHF Radio Installations Capable of Voice Communication and Digital Selective Calling," adopted 19 November 1987.
(c) (2) (ii)
(ii) CCIR Recommendation 493-4, "Digital Selective-calling System for use in the Maritime Mobile Service," 1990.

(c) (3)
(3) MF radio equipment:
(c) (3) (i)
(i) IMO Resolution A. 610(15), "Performance Standards for Shipborne MF Radio Installations Capable of Voice Communication and Digital Selective Calling," adopted 19 November 1987.
(c) (3) (ii)
(ii) CCIR Recommendation 493-4, "Digital Selective-calling System for use in the Maritime Mobile Service," 1990.
(c) (4)
(4) MF/HF radio equipment:
(c) (4) (i)
(i) IMO Resolution A.613(15), "Performance Standards for Shipborne MF/HF Radio Installations capable of Voice Communication, Narrow-band Direct Printing and digital Selective Calling," adopted 19 November 1987.
(c) (4) (ii)
(ii) CCIR Recommendations 493-4, "Digital Selective-calling System for use in the Maritime Mobile Service," 1990.
(c) (4) (iii)
(iii) CCIR Recommendation 625-1, "Direct-printing Telegraph Equipment Employing Automatic Identification in the Maritime Mobile Service," 1990. Equipment may conform to CCIR Recommendation 476-4, "Direct-Printing Telegraph Equipment in the Maritime Mobile Service," 1986, in lieu of CCIR Recommendation 625-1, where such equipment was installed on ships prior to February 1, 1993.
(c) (4) (iv)
(iv) IMO Resolution A.700(17), "Performance Standards for Narrow-band Direct-printing Telegraph Equipment for the Reception of Navigational and Meteorological Warnings and Urgent Information to Ships (MSI) by HF," adopted 6 November 1991.
(c) (5)
(5) 406 MHz EPIRBs:
(c) (5) (i)
(i) IMO Resolution A.611(15), "Performance Standards for Float-free Satellite Emergency Position-indicating Radio Beacons Operating on 406 MHz," adopted 19 November 1987.
(c) (5) (ii)
(ii) IMO Resolution A.662(16), "Performance Standards for Float-free Release and Activation Arrangements for Emergency Radio Equipment," adopted 19 October 1989.
(c) (5) (iii)
(iii) OCIR Recommendation 633-1, "Transmission Characteristics of a Satellite Emergency Position-indicating Radiobeacon (Satellite EPIRB) System Operating Through a Low Polar-orbiting Satellite System in the 406 MHz Band," 1990.
(c) (5) (iv)
(iv) The 406 MHz EPIRBs must also comply with s 80.1061.
(c) (6)
(6) 9 GHz radar transponders:
(c) (6) (i)
(i) IMO Resolution A.604(15), "Performance Standards for Survival Craft Radar Transponders for Use in Search and Rescue Operations," adopted 19 November 1987.
(c) (6) (ii)
(ii) CCIR Recommendation 628-1, Technical Characteristics for Search and Rescue Radar Transponders," 1990.
(c) (7)
(7) Two-way VHF radiotelephone: IMO Resolution A.605(15), "Performance Standards for Survival Craft Two-way VHF Radiotelephone Apparatus," adopted 19 November 1987.

(c) (8)

(8) INMARSAT-A SES: IMO Resolution A.698(17), "Performance Standards for Ship Earth Stations Capable of Two-way Communications," adopted 6 November 1991.

(c) (9)

(9) INMARSAT-C SES: IMO Resolution A.663(16), "Performance Standards for INMARSAT Standard-C Ship Earth Stations Capable of Transmitting and Receiving Direct-printing Communications," adopted 19 October 1989.

(c) (10)

(10) INMARSAT EGC: IMO Resolution A.664(16), "Performance Standards for Enhanced Group Call Equipment," adopted 19 October 1989.

(d)

(d) The above-referenced documents have been approved for incorporation by reference by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Identification data and place to purchase for each of the above-reference documents are listed as follows:

(d) (1)

(1) Copies of IMO Resolutions, the 1974 SOLAS Convention, and the 1983 and 1988 amendments to the 1974 SOLAS Convention can be purchased from Publications, International Maritime Organization, 4 Albert Embankment, London SE1 7SR, United Kingdom.

(d) (1) (i)

(i) IMO resolution A.525(13) is contained in the Resolutions and Other Decisions of the Assembly of the International Maritime Organization, 13th Session, 1983, (IMO, London, 1984), Sales Number 073 84.07.E.

(d) (1) (ii)

(ii) IMO Resolutions A.604(15), A.605(15), A.610(15), A.611(15) and A.613(15) are contained in the Resolutions and Other Decisions of the Assembly of the International Maritime Organization, 15th Session, 1987, (IMO, London, 1988), Sales Number 130 88.03.E.

(d) (1) (iii)

(iii) IMO Resolutions A.662(16), A.663(16) and A.664(16) are contained in the Resolutions and Other Decisions of the Assembly of the International Maritime Organization, 16th Session, 1989, (IMO, London, 1990), Sales Number 136 90.04.E

(d) (1) (iv)

(iv) IMO Resolutions A.694(17), A.698(17), and A.700(17) can be ordered from IMO by requesting "A.694, A.698, or A.700(17) from the seventeenth session." IMO Resolutions A.694(17), A.698(17), and A.700(17) will be published in the Resolutions and Other Decisions of the Assembly of the International Maritime Organization, 17th Session, 1991.

(d) (2)

(2) CCIR Recommendations, ITU Radio Regulations, and CCITT publications can be purchased from the International Telecommunications Union (ITU), Place des Nations, CH-1211 Geneva 20, Switzerland.

(d) (2) (i)

(i) All CCIR Recommendations referenced in this Section are contained in Recommendations of the CCIR, 1990, Volume VIII, (ITU, Geneva, 1990), 92-61-0424104.

(d) (2) (ii)

(ii) CCITT Recommendation E.161 is contained in CCITT Volume II--Telephone and Network ISDN--Operation, Numbering, Routing and Mobile Service, (ITU, Geneva, 1989), ISBN 92-61-03261-3.

(d) (2) (iii)

(iii) CCITT Recommendation Q.11 is contained in CCITT Blue Book Volume VI, General Recommendation on Telephone Switching and Signalling, (ITU, Geneva, 1989), ISBN 92-61-03451-9.

(d) (3)

(3) IEC Publications can be purchased from the International Electrotechnical Commission, 3 Rue de Varembe, CH-1211 Geneva 20, Switzerland, or from the American National Standards Institute (ANSI), 11 West 42nd Street, New York, NY 10036, telephone (212) 642-4900.

(d) (4)

(4) ISO Standards can be purchased from the International Organization for Standardization, 1 Rue de Varembe, CH-1211 Geneva 20, Switzerland, or from the American National Standards Institute (ANSI), 11 West 42nd Street, New York, NY 10036, telephone (212) 642-4900.

(d) (5)

(5) Copies of the publications listed in this Section that are incorporated by reference may be inspected at the Federal Communications Commission, 1919 M Street, NW., Dockets Branch (room 239), Washington, DC or at the Office of the Federal Register, 800 North Capital Street, NW., suite 700, Washington DC.

s 80.1103 Equipment authorization.

(a)

(a) All equipment specified s 80.1101 must be certificated in accordance with 47 CFR part 2 specifically for GMDSS use, except for equipment used in the INMARSAT space segment which must be type-approved by INMARSAT and verified in accordance with 47 CFR part 2 specifically for GMDSS use. The technical parameters of the equipment must conform to the performance standards as specified in s 80.1101. For emergency position-indicating radiobeacons operating on 406 MHz (406 MHz EPIRBs) that were authorized prior to April 15, 1992, and meet the requirements of s 80.1101, the manufacturer may attest by letter that the equipment (indicate FCC ID#) meets the requirements of s 80.1101 and request that it be denoted as approved for GMDSS use.

(b)

(b) Applicants for certification must submit with their applications measurement data sufficiently complete to ensure compliance with the technical parameters. The application must include the items listed in 47 CFR 2.983. Additional measurement data or information may be requested depending upon the equipment. For items not listed in s 2.983 of this chapter, the applicant must attest that the equipment complies with performance standards as specified in s 80.1101 and, where applicable, that measurements have been made that demonstrate the necessary compliance. Submission of representative data demonstrating compliance is not required unless requested by the Commission.

(c)

(c) Applicants for verification must attest that the equipment complies with performance standards as specified in s 80.1101 and, where applicable, that measurements have been made that demonstrate the necessary compliance. Submission of representative data demonstrating compliance is not required unless requested by the Commission. An application must include the items listed in s 2.975 of this chapter and a copy of the INMARSAT type approval certification indicating that equipment meets GMDSS standards and includes all peripheral equipment associated with the specific unit under review.

(d)

(d) Submission of a sample unit is not required unless specifically requested by the Commission.

(e)

(e) In addition to the requirements in part 2 of this chapter, equipment specified in s 80.1101 shall be labelled as follows:
"This device complies with the GMDSS provisions of part 80 of the FCC Rules."
Such a label is not required for emergency position-indicating radiobeacons operating on 406 MHz (406 MHz EPIRBs) that were authorized prior to April 15, 1992.

s 80.1105 Maintenance requirements.

(a)
(a) Equipment must be so designed that the main units can be replaced readily, without elaborate recalibration or readjustment. Where applicable, equipment must be constructed and installed so that it is readily accessible for inspection and on-board maintenance purposes. Adequate information must be provided to enable the equipment to be properly operated and maintained (see IMO Resolution A.569(14)).
(b)
(b) Radio equipment required by this subpart must be maintained to provide the availability of the functional requirements specified in s 80.1081 and to meet the performance standards specified in s 80.1101.
(c)
(c) On ships engaged on voyages in sea areas A1 and A2, the availability must be ensured by duplication of equipment, shore-based maintenance, or at-sea electronic maintenance capability, or a combination of these.
(d)
(d) On ships engaged on voyages in sea areas A3 and A4, the availability must be ensured by using a combination of at least two of the following methods: duplication of equipment, shore-based maintenance, or at-sea electronic maintenance capability.
(e)
(e) Irrespective of the maintenance methods used, a ship must not depart from any port unless and until the ship is capable of performing all distress and safety functions as specified in s 80.1081.
(f)
(f) Irrespective of the maintenance methods used, all manufacturers' instruction manuals and maintenance manuals for each piece of equipment required and installed must be available on-board ship. Adequate tools, spare parts, and test equipment appropriate to the methods used by the ship as recommended by the manufacturer should be provided. The manuals, tools, spare parts, and test equipment, as applicable, should be readily accessible.
(g)
(g) If the duplication of equipment maintenance method is used, the following radio installations, in addition to other equipment requirements specified in this subpart, must be available on-board ships for their sea areas as applicable. Equipment carried in accordance with this paragraph must comply with ss 80.1101 and 80.1103. Additionally, each radio installation must be connected to a separate antenna and be installed and be ready for immediate operation.
(g) (1)
(1) Ships, equipped in accordance with s 80.1087 for sea area A1, must carry a VHF radio installation complying with the requirements of s 80.1085(a)(1).
(g) (2)
(2) Ships, equipped in accordance with s 80.1089 for sea areas A1 and A2, must carry a VHF radio installation complying with the requirements of s 80.1085(a)(1) and an MF radio installation complying with the requirements of s 80.1089(a)(1) and being able to fully comply with watch requirements as

will or to replace the trustee at will. If the trustee has a familial, personal, or extra-trust business relationship to the grantor or the beneficiary, the grantor or beneficiary, as appropriate, will be attributed with the stock interests held in trust.

(c) (2) (iv)

(iv) Non-voting stock shall be attributed as an interest in the issuing entity.

(c) (2) (v)

(v) Limited partnership interests shall be attributed to limited partners and shall be calculated according to both the percentage of equity paid in and the percentage of distribution of profits and losses.

(c) (2) (vi)

(vi) Officers and directors of an entity shall be considered to have an attributable interest in the entity. The officers and directors of an entity that controls a licensee or applicant shall be considered to have an attributable interest in the licensee or applicant.

(c) (2) (vii)

(vii) Ownership interests that are held indirectly by any party through one or more intervening corporations will be determined by successive multiplication of the ownership percentages for each link in the vertical ownership chain and application of the relevant attribution benchmark to the resulting product, except that if the ownership percentage for an interest in any link in the chain exceeds 50 percent or represents actual control, it shall be treated as if it were a 100 percent interest.

(c) (2) (viii)

(viii) Any person who manages the operations of an applicant or licensee pursuant to a management agreement shall be considered to have an attributable interest in such applicant or licensee if such person, or its affiliate pursuant to s 1.2110(b)(4) of this chapter, has authority to make decisions or otherwise engage in practices or activities that determine, or significantly influence:

(c) (2) (viii) (A)

(A) The nature or types of services offered by such an applicant or licensee;

(c) (2) (viii) (B)

(B) The terms upon which such services are offered; or

(c) (2) (viii) (C)

(C) The prices charged for such services.

(c) (2) (ix)

(ix) Any licensee or its affiliate who enters into a joint marketing arrangement with an applicant or licensee, or its affiliate, shall be considered to have an attributable interest, if such applicant or licensee, or its affiliate, has authority to make decisions or otherwise engage in practices or activities that determine, or significantly influence,

(c) (2) (ix) (A)

(A) The nature or types of services offered by such an applicant or licensee;

(c) (2) (ix) (B)

(B) The terms upon which such services are offered; or

(c) (2) (ix) (C)

(C) The prices charged for such services.

(d)

(d) A winning bidder that qualifies as a small business or a consortium of small businesses as defined in s 80.1252(b)(1) or s 80.1252(b)(5) of this subpart may use the bidding credit specified in s 1.2110(e)(2)(ii) of this chapter. A winning bidder that qualifies as a very small business or a consortium of very small businesses as defined in s 80.1252(b)(2) or s 80.1252(b)(5) of this subpart may use the bidding credit specified in s 1.2110(e)(2)(i) of this chapter.

specified in s 80.1123(a)(2). The MF radio installation installed for duplication must also comply with the requirements s 80.1089(c).

(g) (3)

(3) Ships, equipped in accordance with s 80.1091 for sea areas A1, A2, and A3, must carry a VHF radio installation complying with the requirements of s 80.1085(a)(1) and either an MF/HF radio installation complying with the requirements of s 80.1091(b)(1) and being able to fully comply with watch requirements as specified in s 80.1123(a)(2) or an INMARSAT ship earth station complying with the requirements of s 80.1091(a)(1). The MF/HF radio installation or the INMARSAT ship earth station installed for duplication must also comply with the requirements s 80.1091(c).

(g) (4)

(4) Ships, equipped in accordance with s 80.1093 for sea areas A1, A2, A3, and A4, must carry a VHF radio installation complying with the requirement of s 80.1085(a)(1) and an MF/HF radio installation complying with the requirements of s 80.1091(b)(1) and being able to fully comply with watch requirements as specified in s 80.1123(a)(2). The MF/HF radio installation installed for duplication must also comply with the requirements s 80.1091(c).

(h)

(h) The radio installations specified in paragraph (g) of this section (referred as "duplicated equipment"), in addition to the appropriate radio equipment specified in s 80.1099 (referred as "basic equipment"), must be connected to the reserve sources of

energy required by s 80.1099. The capacity of the reserve sources of energy should be sufficient to operate the particular installation (i.e., the basic equipment or the duplicated equipment) with the highest power consumption, for the appropriate period specified in s 80.1099. However, the arrangement for the reserve sources of energy must be such that a single fault in this arrangement cannot affect both the basic and the duplicated equipment.

(i)

(i) If the shore-based maintenance method is used, the following requirements apply.

(i) (1)

(1) Maintenance services must be completed and performance verified and noted in the ship's record before departure from the first port of call entered after any failure occurs.

(i) (2)

(2) Each GMDSS equipment must be tested and performance verified and the results noted in the ship's record before departure from every port. To accomplish this, each ship shall carry a performance checkoff sheet listing each GMDSS equipment carried on a
mandatory basis.

(j)

(j) If the at-sea maintenance method is used, the following requirements apply.

(j) (1)

(1) Adequate additional technical documentation, tools, test equipment, and spare parts must be carried on-board ship to enable a qualified maintainer as specified in s 80.1074 to perform tests and localize and repair faults in the radio equipment.

(j) (2)

(2) Only persons that comply with the requirements of s 80.1074 may perform at-sea maintenance on radio installations required by this subpart.

s 80.1109 Distress, urgency, and safety communications.

(a)
(a) Distress traffic consists of all messages relating to the immediate assistance required by the ship in distress, including search and rescue communications and on-scene communications. Distress traffic must as far as possible be on the frequencies contained in s 80.1077.
(b)
(b) Urgency and safety communications include: navigational and meteorological warnings and urgent information; ship-to-ship safety navigation communications; ship reporting communications; support communications for search and rescue operations; other urgency and safety messages and communications relating to the navigation, movements and needs of ships and weather observation messages destined for an official meteorological service.
(c)
(c) Intership navigation safety communications are those VHF radiotelephone communications conducted between ships for the purpose of contributing to the safe movement of ships. The frequency 156.650 MHz is used for intership navigation safety communications (see s 80.1077).

s 80.1111 Distress alerting.

(a)
(a) The transmission of a distress alert indicates that a mobile unit or person is in distress and requires immediate assistance. The distress alert is a digital selective call using a distress call format in bands used for terrestrial radiocommunication or a distress message format, which is relayed through space stations.
(b)
(b) The distress alert must be sent through a satellite either with absolute priority in general communication channels or on exclusive distress and safety frequencies or, alternatively, on the distress and safety frequencies in the MF, HF, and VHF bands using digital selective calling.
(c)
(c) The distress alert must be sent only on the authority of the person responsible for the ship, aircraft or other vehicle carrying the mobile station or the mobile earth station.
(d)
(d) All stations which receive a distress alert transmitted by digital selective calling must immediately cease any transmission capable of interfering with distress traffic and must continue watch until the call has been acknowledged.

s 80.1113 Transmission of a distress alert.

(a)
(a) The distress alert must identify the station in distress and its position. The distress alert may also contain information regarding the nature of the distress, the type of assistance required, the course and speed of the mobile unit, the time that this information was recorded and any other information which might facilitate rescue.
(b)

(b) The format of distress calls and distress messages must be in accordance with CCIR Recommendation 493 as specified in s 80.1101.

(c)

(c) Ship-to-shore distress alerts are used to alert Rescue Coordination Centers via coast stations or coast earth stations that a ship is in distress. These alerts are based on the use of transmissions via satellites (from a ship earth station or a satellite EPIRB) and terrestrial services (from ship stations and EPIRBs).

(d)

(d) Ship-to-ship distress alerts are used to alert other ships in the vicinity of the ship in distress and are based on the use of digital selective calling in the VHF, MF, and HF bands.

(e)

(e) Shore-to-ship distress alert relays are used by a station or Rescue Coordination Center to relay information about a ship in distress to, as appropriate, all ships, a selected group of ships, or a specific ship by satellite and/or terrestrial means. The distress alert relay must contain the identification of the mobile unit in distress, its position and all other information which might facilitate rescue.

s 80.1115 Transmission of a distress alert by a station not itself in distress.

(a)

(a) A station in the mobile or mobile-satellite service which learns that a mobile unit is in distress must initiate and transmit a distress alert relay in any of the following cases:

(a) (1)

(1) When the mobile unit in distress is not itself in a position to transmit the distress alert; or

(a) (2)

(2) When the master or person responsible for the mobile unit not in distress or the person responsible for the land station determines that further help is necessary.

(b)

(b) A station transmitting a distress alert relay in accordance with paragraph (a) of this section or s 80.1121(c) must indicate that it is not itself in distress.

s 80.1117 Procedure for receipt and acknowledgement of distress alerts.

(a)

(a) Acknowledgement by digital selective calling of receipt of a distress alert in the terrestrial services must comply with CCIR Recommendation 541, which is incorporated by reference.

(b)

(b) Acknowledgement through a satellite of receipt of a distress alert from a ship earth station must be sent immediately (see s 80.1119).

(c)

(c) Acknowledgement by radiotelephony of receipt of a distress alert from a ship station or a ship earth station must be given in the following form:

(c) (1)

(1) The distress signal MAYDAY;

(c) (2)

(2) The call sign or other identification of the station sending the distress message, spoken three times;
(c) (3)
(3) The words THIS IS (or DE spoken as DELTA ECHO in case of language difficulties);
(c) (4)
(4) The call sign or other identification of the station acknowledging receipt, spoken three times;
(c) (5)
(5) The word RECEIVED (or RRR spoken as ROMEO ROMEO ROMEO in case of language difficulties);
(c) (6)
(6) The distress signal MAYDAY.
(d)
(d) The acknowledgement by direct-printing telegraphy of receipt of a distress alert from a ship station must be given in the following form:
(d) (1)
(1) The distress signal MAYDAY;
(d) (2)
(2) The call sign or other identification of the station sending the distress alert;
(d) (3)
(3) The word DE;
(d) (4)
(4) The call sign or other identification of the station acknowledging receipt of the distress alert;
(d) (5)
(5) The signal RRR;
(d) (6)
(6) The distress signal MAYDAY.
(e)
(e) The acknowledgement by direct-printing telegraphy of receipt of a distress alert from a ship earth station must be given by the coast earth station receiving the distress alert by retransmitting the ship station identity of the ship transmitting the distress alert.

s 80.1119 Receipt and acknowledgement of distress alerts by coast stations and coast earth stations.

(a)
(a) Coast stations that receive a distress alert should defer acknowledgement for a short interval so that receipt may be acknowledged by a Rescue Coordination Center. Where an acknowledgement is not forthcoming within 3 minutes, the coast station in receipt of distress alerts must ensure that they are routed to a Rescue Coordination Center as soon as possible. Coast stations must provide assistance for distress communications when requested to do so by the U.S. Coast Guard. (This subpart does not specify any radio watches for coast stations.)
(b)
(b) Coast earth stations in receipt of distress alerts must ensure that they are routed as soon as possible to a Rescue Coordination Center. Coast earth stations must relay, as soon as possible, an acknowledgement of a distress alert from a Rescue Coordination Center.
(c)

(c) Certain messages must be carried without charge, regardless of the means by which they are transmitted:
(c) (1)
(1) Distress alert messages;
(c) (2)
(2) Search and rescue coordination messages;
(c) (3)
(3) Medical assistance messages where an imminent danger to life is present, or
(c) (4)
(4) Urgent meteorological or navigational danger messages passed in the ship-to-shore direction.

s 80.1121 Receipt and acknowledgement of distress alerts by ship stations and ship earth stations.

(a)
(a) Ship or ship earth stations that receive a distress alert must, as soon as possible, inform the master or person responsible for the ship of the contents of the distress alert.
(b)
(b) In areas where reliable communications with one or more coast stations are practicable, ship stations in receipt of a distress alert should defer acknowledgement for a short interval so that receipt may be acknowledged by a coast station.
(c)
(c) Ship stations operating in areas where reliable communications with a coast station are not practicable that receive a distress alert from a ship station which is, beyond doubt, in their vicinity, must, as soon as possible and if appropriately equipped, acknowledge receipt and inform a Rescue Coordination Center through a coast station or coast earth station (see s 80.1115(a)(2)). However, a ship station receiving an HF distress alert must not acknowledge it but must observe the requirements of s 80.1123, and must, if the alert is not acknowledged by a coast station within 3 minutes, relay the distress alert.
(d)
(d) A ship station acknowledging receipt of a distress alert in accordance with paragraphs (b) or (c) of this section should:
(d) (1)
(1) Acknowledge receipt of the alert by using radiotelephony on the distress and safety traffic frequency in the band used for the alert;
(d) (2)
(2) If acknowledgement by radiotelephony of the distress alert received on the MF or VHF distress alerting frequency is unsuccessful, acknowledge receipt of the distress alert by responding with a digital selective call on the appropriate frequency.
(e)
(e) A ship station in receipt of a shore-to-ship distress alert relay (see s 80.1113(e)) should establish communication as directed and render such assistance as required and appropriate.

s 80.1123 Watch requirements for ship stations.

(a)
(a) While at sea, all ships must maintain a continuous watch:
(a) (1)

(1) On VHF DSC channel 70, if the ship is fitted with a VHF radio installation in accordance with s 80.1085(a)(2);

(a) (2)

(2) On the distress and safety DSC frequency 2187.5 kHz, if the ship is fitted with an MF radio installation in accordance with ss 80.1089(a)(2) or 80.1091(a)(3);

(a) (3)

(3) On the distress and safety DSC frequencies 2187.5 kHz and 8414.5 kHz also on at least one of the distress and safety DSC frequencies 4207.5 kHz, 6312 kHz, 12577 kHz, or 16804.5 kHz appropriate to the time of day and the geographical position of the ship, if the ship is fitted with an MF/HF radio installation in accordance with ss 80.1091(a)(2)(ii) or 80.1093(a) of this part (this watch may be kept by means of a scanning receiver limited to six distress and safety DSC frequencies); and

(a) (4)

(4) For satellite shore-to-ship distress alert, if the ship is fitted with an INMARSAT ship earth station in accordance with s 80.1091(a)(1).

(b)

(b) While at sea, all ships must maintain radio watches for broadcasts of maritime safety information on the appropriate frequency or frequencies on which such information is broadcast for the area in which the ship is navigating.

(c)

(c) Until February 1, 1999, every ship while at sea must maintain, when practicable, a continuous listening watch on VHF Channel 16. This watch must be kept at the position from which the ship is normally navigated or at a position which is continuously manned.

(d)

(d) Until February 1, 1999, every ship required to carry a radiotelephone watch receiver must maintain, while at sea, a continuous watch on the radiotelephone distress frequency 2182 kHz. This watch must be kept at the position from which the ship is normally navigated or at a position which is continuously manned.

(e)

(e) On receipt of a distress alert transmitted by use of digital selective calling techniques, ship stations must set watch on the radiotelephone distress and safety traffic frequency associated with the distress and safety calling frequency on which the distress alert was received.

(f)

(f) Ship stations with narrow-band direct printing equipment must set watch on the narrow-band direct-printing frequency associated with the distress alert signal if it indicates that narrow-band direct-printing is to be used for subsequent distress communications. If practicable, they should additionally set watch on the radiotelephone frequency associated with the distress alert frequency.

s 80.1125 Search and rescue coordinating communications.

(a)

(a) The distress signal consists of the word MAYDAY, pronounced in radiotelephony as the French expression "M'aider". For distress traffic by radiotelephony, when establishing communications, calls must be prefixed by the distress signal MAYDAY.

(b)

(b) Error correction techniques, in accordance with CCIR Recommendation 625 as specified in s 80.1101, must be used for distress traffic by direct-printing

telegraphy. All messages must be preceded by at least one carriage return, a line feed signal, a letter shift signal and the distress signal MAYDAY.

(c)

(c) Distress communications by direct-printing telegraphy should be in the ARQ mode when ships are communicating directly to the Coast Guard or other coast stations on channels which they normally guard. Other distress communications, including those on simplex channels provided for that purpose, should be in the broadcast forward error correction mode. The ARQ mode may subsequently be used when it is advantageous to do so.

(d)

(d) The Rescue Coordination Center responsible for controlling a search and rescue operation will also coordinate the distress traffic relating to the incident or may appoint another station to do so.

(e)

(e) The Rescue Coordination Center coordinating distress traffic, the unit coordinating search and rescue operations, or the coast station involved may impose silence on stations which interfere with that traffic. This instruction may be addressed to all stations or to one station only, according to circumstances. In either case, the following will be used:

(e) (1)

(1) In radiotelephony, the signal SEELONCE MAYDAY, pronounced as the French expression "silence, m'aider";

(e) (2)

(2) In narrow-band direct-printing telegraphy normally using forward-error correcting mode, the signal SILENCE MAYDAY. However, the ARQ mode may be used when it is advantageous to do so.

(f)

(f) Until they receive the message indicating that normal working may be resumed (see paragraph (h) of this section), all stations which are aware of the distress traffic, and which are not taking part in it, and which are not in distress, are forbidden to transmit on the frequencies in which the distress traffic is taking place.

(g)

(g) Stations following distress traffic that are able to continue normal service may do so when the distress traffic is well established and on condition that it observes the provisions of paragraph (f) of this section and that it does not interfere with
distress traffic.

(h)

(h) When distress traffic has ceased on frequencies which have been used for distress traffic, the Rescue Coordination Center controlling a search and rescue operation must initiate a message for transmission on these frequencies indicating that distress traffic has finished.

(i)

(i) In radiotelephony, the message referred to in paragraph (h) of this section consists of:

(i) (1)

(1) The distress signal MAYDAY;

(i) (2)

(2) The call "Hello all stations" or CQ (spoken as CHARLIE QUEBEC) spoken three times;

(i) (3)

(3) The words THIS IS (or DE spoken as DELTA ECHO in the case of language difficulties);

(i) (4)

(4) The call sign or other identification of the station sending the message;

(i) (5)

(5) The time when the distress situation has ceased;
(i) (6)

(6) The name and call sign of the mobile station which was in distress;
(i) (7)
(7) The words SEELONCE FEENEE pronounced as the French words "silence fini"
(j)
(j) In direct-printing telegraphy, the message referred to in paragraph (h) of this section consists of:
(j) (1)
(1) The distress signal MAYDAY;
(j) (2)
(2) The call CQ;
(j) (3)
(3) The word DE;
(j) (4)
(4) The call sign or other identification of the station sending the message;
(j) (5)
(5) The time when distress situation has ceased;
(j) (6)
(6) The name and call sign of the mobil station which was in distress; and
(j) (7)
(7) The words SILENCE FINI.

s 80.1127 On-scene communications.

(a)
(a) On-scene communications are those between mobile unit in distress and assisting mobile units, and between the mobile units and unit coordinating search and rescue operations.
(b)
(b) Control of on-scene communications is the responsibility of the unit coordinating search and rescue operations. Simplex communications must be used so that all on-scene mobile stations may share relevant information concerning the distress incident. If direct-printing telegraphy is used, it must be in the forward error-correcting mode in accordance with CCIR Recommendation 625 as specified in s 80.1101.
(c)
(c) The preferred frequencies in radiotelephony for on-scene communications are 156.8 MHz and 2182 kHz. The frequency 2174.5 kHz may also be used for ship-to-ship on-scene communications using narrow-band direct-printing telegraphy in the forward error correcting mode in accordance with CCIR Recommendation 625 as specified in s 80.1101.
(d)
(d) In addition to 156.8 MHz and 2182 kHz, the frequencies 3023 kHz, 4125 kHz, 5680 kHz, 123.1 MHz and 156.3 MHz may be used for ship-to-aircraft on-scene communications.
(e)
(e) The selection or designation of on-scene frequencies is the responsibility of the unit coordinating search and rescue operations. Normally, once an on-scene frequency is established, a continuous aural or teleprinter watch is maintained by all participating on-scene mobile units on the selected frequency.

s 80.1129 Locating and homing signals.

(a)
(a) Locating signals are radio transmissions intended to facilitate the finding of a mobile unit in distress or the location of survivors. These signals include those transmitted by searching units and those transmitted by the mobile unit in distress, by survival craft, by float-free EPIRBS, by satellite EPRIBs, and by search and rescue radar transponders to assist the searching units.
(b)
(b) Homing signals are those locating signals which are transmitted by mobile units in distress, or by survival craft, for the purpose of providing searching units with a signal that can be used to determine the bearing to the transmitting stations.
(c)
(c) Locating signals may be transmitted in the following frequency bands: 117.975-136 MHz, 121.5 MHz, 156-174 MHz, 406-406.1 MHz, and 9200-9500 MHz.
(d)
(d) The 9 GHz locating signals must be in accordance with CCIR Recommendation 628 as specified in s 80.1101.

s 80.1131 Transmissions of urgency communications.

(a)
(a) In a terrestrial system the announcement of the urgency message must be made on one or more of the distress and safety calling frequencies specified in s 80.1077 using digital selective calling and the urgency call format. A separate announcement need not be made if the urgency message is to be transmitted through the maritime mobile-satellite service.
(b)
(b) The urgency signal and message must be transmitted on one or more of the distress and safety traffic frequencies specified in s 80.1077, or via the maritime mobile-satellite service or on other frequencies used for this purpose.
(c)
(c) The urgency signal consists of the words PAN PAN. In radiotelephony each word of the group must be pronounced as the French word "panne".
(d)
(d) The urgency call format and the urgency signal indicate that the calling station has a very urgent message to transmit concerning the safety of a mobile unit or a person.
(e)
(e) In radiotelephony, the urgency message must be preceded by the urgency signal, repeated three times, and the identification of the transmitting station.
(f)
(f) In narrow-band direct-printing, the urgency message must be preceded by the urgency signal and the identification of the transmitting station.
(g)
(g) The urgency call format or urgency signal must be sent only on the authority of the master or the person responsible for the mobile unit carrying the mobile station or mobile earth station.
(h)

(h) The urgency call format or the urgency signal may be transmitted by a land station or a coast earth station with the approval of the responsible authority.
(i)
(i) When an urgency message which calls for action by the stations receiving the message has been transmitted, the station responsible for its transmission must cancel it as soon as it knows that action is no longer necessary.
(j)
(j) Error correction techniques, in accordance with CCIR Recommendation 625 as specified in s 80.1101, must be used for urgency messages by direct-printing telegraphy. All messages must be preceded by at least one carriage return, a line feed signal, a letter shift signal and the urgency signal PAN PAN.
(k)
(k) Urgency communications by direct-printing telegraphy should be in the ARQ mode when communicating directly to the Coast Guard or other coast stations on channels which they normally guard. Other distress communications, including those on simplex channels provided for that purpose, should be in the broadcast forward error correction mode. The ARQ mode may subsequently be used when it is advantageous to do so.

s 80.1133 Transmission of safety communications.

(a)
(a) In a terrestrial system the announcement of the safety message must be made on one or more of the distress and safety calling frequencies specified in s 80.1077 using digital selective calling techniques. A separate announcement need not be made if the message is to be transmitted through the maritime mobile-satellite service.
(b)
(b) The safety signal and message must normally be transmitted on one or more of the distress and safety traffic frequencies specified in s 80.1077, or via the maritime mobile satellite service or on other frequencies used for this purpose.
(c)
(c) The safety signal consists of the word SECURITE. In radiotelephony, it is pronounced as in French.
(d)
(d) The safety call format or the safety signal indicates that the calling station has an important navigational or meteorological warning to transmit.
(e)
(e) In radiotelephony, the safety message must be preceded by the safety signal, repeated three times, and the identification of the transmitting station.
(f)
(f) In narrow-band direct-printing, the safety message must be preceded by the safety signal and the identification of the transmitting station.
(g)
(g) Error correction techniques, in accordance with CCIR Recommendation 625 as specified in s 80.1101, must be used for safety messages by direct-printing telegraphy. All messages must be preceded by at least one carriage return, a line feed signal, a letter shift signal and the safety signal SECURITE.
(h)
(h) Safety communications by direct-printing telegraphy should be in the ARQ mode when communicating directly to the Coast Guard or other coast stations on channels which they normally guard. Other distress communications, including

those on simplex channels provided for that purpose, should be in the broadcast forward error correction mode. The ARQ mode may subsequently be used when it is advantageous to do so.

s 80.1135 Transmission of maritime safety information.

(a)
(a) The operational details of the stations transmitting maritime safety information in accordance with this section are indicated in the ITU List of Radiodetermination and Special Service Stations and the IMO Master Plan of Shore-Based Facilities.
(b)
(b) The mode and format of the transmissions mentioned in this section is in accordance with the CCIR Recommendation 540 as specified in s 80.1101.
(c)
(c) Maritime safety information is transmitted by means of narrow-band direct-printing telegraphy with forward error correction using the frequency 518 kHz in accordance with the international NAVTEX system (see s 80.1077).
(d)
(d) The frequency 490 kHz may be used, after full implementation of the GMDSS, for the transmission of maritime safety information by means of narrow-band direct-printing telegraphy with forward error correction (see s 80.1077).
(e)
(e) Internationally, the frequency 4209.5 kHz is used for NAVTEX-type transmissions by means of narrow-band direct-printing telegraphy with forward error correction (see s 80.1077).
(f)
(f) Maritime safety information is transmitted by means of narrow-band direct-printing telegraphy with forward error correction using the frequencies 4210 kHz, 6314 kHz, 8416.5 kHz, 12579 kHz, 16806.5 kHz, 19680.5, 22376 kHz, and 26100.5 kHz (see s 80.1077).
(g)
(g) Maritime safety information is transmitted via satellite in the maritime mobile-satellite service using the band 1530-1545 MHz (see s 80.1077).

SUBPART X--VOLUNTARY RADIO INSTALLATIONS
GENERAL

s 80.1151 Voluntary radio operations.

Voluntary ships must meet the rules applicable to the particular mode of operation as contained in the following subparts of this part and as modified by s 80.1153:

Operating Requirements and Procedures--Subpart C

Equipment Technical Requirements--Subpart E

Frequencies--Subpart H

s 80.1153 Station log and radio watches.

(a)
(a) Licensees of voluntary ships are not required to operate the ship radio station or to maintain radio station logs.
(b)
(b) When a ship radio station of a voluntary ship is being operated, appropriate general purpose watches must be maintained in accordance with ss 80.146, 80.147 and 80.148.

s 80.1155 Radioprinter.

Radioprinter operations provide record communications between authorized maritime mobile stations.
(a)
(a) Supplementary eligibility requirements. Ships must be less than 1600 gross tons.
(b)
(b) Scope of communication.
(b) (1)
(1) Ship radioprinter communications may be conducted with an associated private coast station.
(b) (2)
(2) Ships authorized to communicate by radioprinter with a common private coast station may also conduct intership radioprinter operations.
(b) (3)
(3) Only those communications which are associated with the business and operational needs of the ship are authorized.
(c)
(c) Assignment and use of frequencies.
(c) (1)
(1) Frequencies for radioprinter operations are shared by several radio services including the maritime mobile service.
(c) (2)
(2) Ship stations must conduct radioprinter operations only on frequencies assigned to their associated private coast station for that purpose.
(d)
(d) Authorization procedure. The authorization procedure for ship station radioprinter operations is as follows:
(d) (1)
(1) The associated private coast station must submit an application for specific radioprinter frequencies and provide the names of ships to be served.
(d) (2)
(2) When the private coast station receives a radioprinter license, it must provide copies of their license to all ships with which they are authorized to conduct radioprinter operations. The private coast station license copy must be kept as part of the ship station license.
(d) (3)
(3) Any addition or deletion of ships must be notified to the Commission by letter.

s 80.1157 Facsimile.

Facsimile is a form of telegraphy for the transmission and receipt of fixed images. Ships must use facsimile techniques only with authorized public coast stations.

s 80.1159 Narrow-band direct-printing (NB-DP).

NB-DP is a form of telegraphy for the transmission and receipt of direct printing public correspondence. Ships must use NB-DP techniques only with authorized public coast stations.

s 80.1161 Emergency position indicating radiobeacon (EPIRB).

EPIRB transmissions must be used only under emergency conditions. The various classes of EPIRB's are described in Subpart V of this part.

s 80.1165 Assignment and use of frequencies.

Frequencies for general radiotelephone purposes are available to ships in three radio frequency bands. Use of specific frequencies must meet the Commission's rules concerning the scope of service and the class of station with which communications are intended. The three frequency bands are:

(a)

(a) 156-158 MHz (VHF/FM Radiotelephone). Certain frequencies within this band are public correspondence frequencies and they must be used as working channels when communicating with public coast stations. Other working frequencies within the band are categorized by type of communications for which use is authorized when communicating with a private coast station or between ships. Subpart H of this part lists the frequencies and types of communications for which they are available.

(b)

(b) 1600-4000 kHz (SSB Radiotelephone). Specific frequencies within this band are authorized for single sideband (SSB) communications with public and private coast stations or between ships. The specific frequencies are listed in Subpart H of this part.

(c)

(c) 4000-23000 kHz (SSB Radiotelephone). Specific frequencies within this band are authorized for SSB communications with public and private coast stations. The specific frequencies are listed in Subpart H of this part.

s 80.1169 [Reserved]

s 80.1171 Assignment and use of frequencies.

(a)

(a) The frequencies assignable to AMTS stations are listed in s 80.385(a). These frequencies are assignable to ship and coast stations for voice, facsimile and radioteletypewriter communications.

SUBPART X--VOLUNTARY RADIO INSTALLATIONS ON-BOARD COMMUNICATIONS

s 80.1175 Scope of communications of on-board stations.

(a)
(a) On-board stations communicate:
(a) (1)
(1) With other units of the same station for operational communications on the ship.
(a) (2)
(2) With on-board stations of another ship or shore facility to aid in oil pollution prevention during the transfer of 250 or more barrels of oil.
(a) (3)
(3) With other units of the same station in the immediate vicinity of the ship for operational communications related to docking, life boat and emergency drills or in the maneuvering of cargo barges and lighters.
(b)
(b) An on-board station may communicate with a station in the Business Radio Service operating on the same frequency when the vessel on which the on-board station is installed is alongside the dock or cargo handling facility.

s 80.1177 Assignment and use of frequencies.

On-board frequencies are assignable only to ship stations. When an on-board repeater is used, paired frequencies must be used. On-board repeater frequencies must be used for single frequency simplex operations. On-board frequencies are listed in Subpart H.

s 80.1179 On-board repeater limitations.

When an on-board repeater is used, the following limitations must be met:
(a)
(a) The on-board repeater antenna must be located no higher than 3 meters (10 feet) above the vessel's highest working deck.
(b)
(b) Each on-board repeater must have a timer that deactivates the transmitter if the carrier remains on for more than 3 minutes.

s 80.1181 Station identification.

(a)
(a) On-board stations must identify when:
(a) (1)
(1) The vessel is within 32 km (20 miles) of any coastline; or
(a) (2)
(2) The communications are likely to be received aboard another vessel.

(b)

(b) Identification, when required, must be:

(b) (1)

(1) Transmitted at the beginning and the end of a series of communications. Whenever communications are sustained for a period exceeding 15 minutes, station identification must be transmitted at intervals not exceeding 15 minutes.

(b) (2)

(2) In English and must include the name of the vessel, followed by a number or name designating the respective mobile unit, for example: "S.S. United States Mobile One, this is Mobile Two."

s 80.1183 Remote control for maneuvering or navigation.

(a)

(a) An on-board station may be used for remote control of maneuvering or navigation control systems aboard the same ship or, where that ship is towing a second ship, aboard the towed ship.

(b)

(b) The remote control system transmissions must contain a synchronization signal and a message signal composed of a documentation number group, a company control group, an actuation instruction group, and a termination of transmission group.

(b) (1)

(1) The synchronization signal must be the control character "SYN", transmitted twice.

(b) (2)

(2) The message signal is composed of the following groups:

(b) (2) (i)

(i) The documentation number group must be transmitted once and be the ship's U.S. Coast Guard documentation number or, if the ship is not documented, the call sign of the on-board station.

(b) (2) (ii)

(ii) The company control group, composed of three letters taken from AAA through ZZZ, which must be transmitted one time.

(b) (2) (iii)

(iii) The actuation instruction group, composed of two letters taken from AA through ZZ, which must be transmitted one time.

(b) (2) (iv)

(iv) The termination of transmission group, composed of the control character "EM", which must be transmitted twice.

(c)

(c) The receiving system must:

(c) (1)

(1) Reject any actuation instruction until it recognizes and accepts the company control group.

(c) (2)

(2) Reject any company control group until it recognizes and accepts the documentation number group.

(d)

(d) The emission employed must be G2D. The provisions applicable to G3E emission are also applicable to G2D emission.

(e)

(e) The binary information must be applied to the carrier as frequency-shift keying (FSK) of the standard tones 1070 and 1270 Hz. "0" (low) must correspond to 1070 Hz and "1" (high) must correspond to 1270 Hz. The signalling rate must be 300 bits per second.

(f)
(f) The alphabet employed must be the United States of America Standard Code for Information Interchange (USASCII), contained in the United States of America Standards Institute publication USAS X3.4-1968.
(f) (1)
(1) The bit sequence must be least significant bit first to most significant bit (bit 1 through bit 7), consecutively.
(f) (2)
(2) The character structure must consist of 8 bits (seven bits plus one character parity bit) having equal time intervals.
(f) (3)
(3) "Odd" parity is required.

SUBPART X--VOLUNTARY RADIO INSTALLATIONS
MOBILE-SATELLITE STATIONS

s 80.1185 Supplemental eligibility for mobile-satellite stations.

Stations in the maritime mobile-satellite service must meet the eligibility requirements contained in this section.
(a)
(a) A station license for a ship earth station may be issued to:
(a) (1)
(1) The owner or operator of a ship.
(a) (2)
(2) A corporation proposing to furnish a nonprofit radio communication service to its parent corporation, to another subsidiary of the same parent, or to its own subsidiary, where the party to be served is the owner or operator of the ship aboard which the ship earth station is to be installed and operated.
(b)
(b) A station license for a portable ship earth station may be issued to the owner or operator of portable earth station equipment proposing to furnish satellite communication services on board more than one ship or fixed offshore platform located in the marine environment.

s 80.1187 Scope of communication.

Ship earth stations must be used for telecommunications related to the business or operation of ships and for public correspondence of persons on board. Portable ship earth stations are authorized to meet the business, operational and public correspondence telecommunication needs of fixed offshore platforms located in the marine environment as well as ships. The types of emission are determined by the INMARSAT organization.

s 80.1189 Portable ship earth stations.

(a)
(a) Portable ship earth stations are authorized to operate on board more than one ship. Portable ship earth stations are also authorized to be operated on board fixed offshore platforms located in international or United States domestic waters.
(b)

(b) Portable ship earth stations must meet the rule requirements of ship earth stations with the exception of eligibility.
(c)
(c) Where the license of the portable ship earth station is not the owner of the ship or fixed platform on which the station is located, the station must be operated with the permission of the owner or operator of the ship or fixed platform.

SUBPART X--VOLUNTARY RADIO INSTALLATIONS
RADIODETERMINATION

s 80.1201 Special determination for cable-repair ship stations.

(a)
(a) A ship station may be authorized to use radio channels in the 285-315 kHz band in Region 1 and 285-325 kHz in any other region for cable repair radiodetermination purposes under the following conditions:
(a) (1)
(1) The radio transmitting equipment attached to the cable-marker buoy associated with the ship station must be described in the station application;
(a) (2)
(2) The call sign used for the transmitter operating under the provisions of this section is the call sign of the ship station followed by the letters "BT" and the identifying number of the buoy.
(a) (3)
(3) The buoy transmitter must be continuously monitored by a licensed radiotelegraph operator on board the cable repair ship station; and
(a) (4)
(4) The transmitter must operate under the provisions in s 80.375(b).

SUBPART Y--COMPETITIVE BIDDING PROCEDURES

s 80.1251 Maritime communications services subject to competitive bidding.

Mutually exclusive initial applications for VPCSA licenses, high seas public coast station licenses, and AMTS coast station licenses are subject to competitive bidding procedures. The procedures set forth in part 1, subpart Q of this chapter will apply unless otherwise provided in this part.

s 80.1252 Designated entities.

(a)
(a) This section addresses certain issues concerning designated entities in maritime communications services subject to competitive bidding. Issues that are not addressed in this section are governed by the designated entity provisions in part 1, subpart Q of this chapter.
(b)
(b) Eligibility for small business provisions.
(b) (1)
(1) A small business is an entity that, together with its affiliates and controlling interests, has average gross revenues not to exceed $15 million for the preceding three years.

(b) (2)
(2) A very small business is an entity that, together with its affiliates and controlling interests, has average gross revenues not to exceed $3 million for the preceding three years.
(b) (3)
(3) For purposes of determining whether an entity meets either of the definitions set forth in paragraph (b)(1) or (b)(2) of this section, the gross revenues of the entity, its affiliates, and controlling interests shall be considered on a cumulative basis and aggregated.
(b) (4)
(4) Where an applicant or licensee cannot identify controlling interests under the standards set forth in this section, the gross revenues of all interest holders in the applicant, and their affiliates, will be attributable.
(b) (5)
(5) A consortium of small businesses (or a consortium of very small businesses) is a conglomerate organization formed as a joint venture between or among mutually independent business firms, each of which individually satisfies the definition in paragraph (b)(1) of this section (or each of which individually satisfies the definition in paragraph (b)(2) of this section). Where an applicant or licensee is a consortium of small businesses (or very small businesses), the gross revenues of each small business (or very small business) shall not be aggregated.
(c)
(c) Controlling interest.
(c) (1)
(1) For purposes of this section, controlling interest includes individuals or entities with de jure and de facto control of the applicant. De jure control is greater than 50 percent of the voting stock of a corporation, or in the case of a partnership, the general partner. De facto control is determined on a case-by-case basis. An entity must disclose its equity interest and demonstrate at least the following indicia of control to establish that it retains de facto control of the applicant:
(c) (1) (i)
(i) The entity constitutes or appoints more than 50 percent of the board of directors or management committee;
(c) (1) (ii)
(ii) The entity has authority to appoint, promote, demote, and fire senior executives that control the day-to-day activities of the licensee; and
(c) (1) (iii)
(iii) The entity plays an integral role in management decisions.
(c) (2)
(2) Calculation of certain interests.
(c) (2) (i)
(i) Ownership interests shall be calculated on a fully diluted basis; all agreements such as warrants, stock options and convertible debentures will generally be treated as if the rights thereunder already have been fully exercised.
(c) (2) (ii)
(ii) Partnership and other ownership interests and any stock interest equity, or outstanding stock, or outstanding voting stock shall be attributed as specified in paragraphs (c)(2)(iii) through (c)(2)(ix) of this section.
(c) (2) (iii)
(iii) Stock interests held in trust shall be attributed to any person who holds or shares the power to vote such stock, to any person who has the sole power to sell such stock, and, to any person who has the right to revoke the trust at